

## **REMARKS**

### **I. Introduction**

By the present Amendment, claims 1, 5, 13, 15, and 18 have been amended. Claim 6 has been cancelled without any prejudice or disclaimer to the subject matter recited therein. Accordingly, claims 1-5 and 7-20 remain pending in the application. Claims 1 and 13 are independent.

### **II. Office Action Summary**

In the Office Action of February 6, 2008, claims 1-4, 7-9, and 11-13 were rejected under 35 USC §102(e) as being anticipated by U.S. Patent No. 6,558,324 issued to Von Behren et al. ("Von Behren"). This rejection is respectfully traversed.

The Examiner's indication that claims 5, 6, 10, and 14-20 would be allowable, if rewritten in independent form to include all the limitations of the base claims and any intervening claims, is noted with appreciation.

### **III. Rejections under 35 USC §102**

Claims 1-4, 7-9, and 11-13 were rejected under 35 USC §102(e) as being anticipated by Von Behren. Regarding this rejection, the Office Action indicates that Von Behren discloses a system and method for strain image display that includes an initial B-mode scan along with respective frame registration wherein a form image as well as an elasticity image are provided. Reconstruction is indicated as being performed, and subsequent images are processed and superimposed. The Office Action further indicates that Von Behren discloses selective transmitting and receiving user selection of a particular frame for display, and display of both or one of the parameters related to form and/or elasticity.

By the present Amendment, independent claim 1 has been amended to recite various features that are not shown or suggested by the art of record. As amended, independent claim 1 defines an ultrasonograph apparatus that comprises:

- an ultrasonic probe for transmitting/receiving an ultrasonic wave to/from a patient;

- means for generating an ultrasonic transmission signal and transmitting it to the ultrasonic probe;

- means for performing reception processing on a reflection echo signal received by the ultrasonic probe;

- means for re-constructing a form image according to the reception signal processed by the reception processing means;

- means for re-constructing an elasticity image according to the reception signal processed by the reception processing means;

- means for displaying the form image and the elasticity image; and

- means for switching between the form image mode and the elasticity image mode;

- wherein the reception processing means includes first reception processing means for the form image and second reception processing means for the elasticity image, and

- wherein the control means switches between the first reception processing means and the second reception processing means according to selection of the form image or the elasticity.

The ultrasonographic apparatus of independent claim 1 includes an ultrasonic probe for transmitting/receiving an ultrasonic wave to/from a patient, means for generating an ultrasonic transmission signal and transmitting it to the ultrasonic probe, and means for performing reception processing on a reflection echo signal received by the ultrasonic probe. The apparatus further includes means for reconstructing a form image according to the reception signal processed by the reception processing means, means for reconstructing an elasticity image according to the reception signal processed by the reception processing means, means for displaying the form image and the elasticity image, and means for switching between

the form image mode and the elasticity image mode. According to independent claim 1, the reception processing means includes a first reception processing means for the form image and a second reception processing means for the elasticity image. Furthermore, the control means switches between the first reception means and the second reception processing means according to selection of the form image or the elasticity image.

As discussed in the Specification, the ultrasonographic apparatus includes a reception circuit system (3) that is connected to a form image reconstruction section (4) and an elasticity image reconstruction section (5). Reception signals that are received from the ultrasonic probe are output to the form image reconstruction section and the elasticity image reconstruction section. See paragraph [0017] of the published application and Fig. 1. Furthermore, the form image reconstruction section processes the reception signal and creates a form image that is output to the display superimposing section (6). Similarly, the elasticity image reconstruction section processes the reception signal output from the reception circuit system and creates an elasticity image that is output to the display superimposing section. The elasticity image and the form image are independently reconstructed using the output from the reception circuit system within predefined allocation periods. See paragraphs [0021] and [0022].

Applicants' review of Von Behren has failed to reveal any disclosure or suggestion for the newly incorporated features of the claimed invention. In particular, Applicants note that the system of Von Behren does not directly relate to estimation of strain or elasticity. Rather, the system relies on this information being obtained from a different source and only processes and displays the results. See column 8, lines 32-35. Furthermore, Von Behren does not appear to provide any

disclosure or suggestion that the form image and elasticity image can be independently processed. More particularly, Von Behren fails to provide any disclosure or suggestion for features recited in independent claim 1 such as:

wherein the reception processing means includes first reception processing means for the form image and second reception processing means for the elasticity image, and

wherein the control means switches between the first reception processing means and the second reception processing means according to selection of the form image or the elasticity.

It is therefore respectfully submitted that independent claim 1 is allowable over the art of record.

Claims 2-5 and 7-12 depend from independent claim 1, and are therefore believed allowable for at least the reasons set forth above with respect to independent claim 1. In addition, these claims each introduce novel elements that independently render them patentable over the art of record.

As amended, independent claim 13 defines a method for measuring elasticity of a biological tissue that comprises the steps of:

generating an ultrasonic transmission signal and transmitting it to an ultrasonic probe; performing reception processing on a reflection echo signal received by the ultrasonic probe;

re-constructing at least one of a form image and an elasticity image based on the reception signal having undergone the reception processing;

displaying at least one of the form image and the elasticity image; and

switching between a form image mode and an elasticity image mode;

wherein the reception processing step switches between and performs first reception processing for the form image and second reception processing for the elasticity image according to the selection of the form image or the elasticity image.

According to independent claim 13, an ultrasonic transmission signal is generated and transmitted to an ultrasonic probe, and reception processing is performed on a reflection echo signal received by the ultrasonic probe. At least one

of a form image and an elasticity image is reconstructed based on the reception signal that has been processed. Next, the form image and/or elasticity image is displayed, with switching between a form image mode and an elasticity image mode. Further, according to independent claim 13, the reception processing step switches between a first reception processing for the form image and a second reception processing for the elasticity image in accordance with selection of either the form image or the elasticity image, while performing such processing.

As previously discussed with respect to independent claim 1, the cited references fail to provide any disclosure or suggestion for separately processing the form image and the elasticity image. It is therefore respectfully submitted that independent claim 13 is allowable over the art of record.

Claims 14-20 depend from independent claim 13, and are therefore believed allowable for at least the reasons set forth above with respect to independent claim 13. In addition, these claims each introduce novel independently render them patentable over the art of record.

#### **IV. Conclusion**

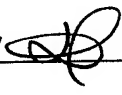
For the reasons stated above, it is respectfully submitted that all of the pending claims are now in condition for allowance. Therefore, the issuance of a Notice of Allowance is believed in order, and courteously solicited.

If the Examiner believes that there are any matters which can be resolved by way of either a personal or telephone interview, the Examiner is invited to contact Applicants' undersigned attorney at the number indicated below.

**AUTHORIZATION**

Applicants request any shortage or excess in fees in connection with the filing of this paper, including extension of time fees, and for which no other form of payment is offered, be charged or credited to Deposit Account No. 01-2135 (Case: 389.45034X00).

Respectfully submitted,  
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